# Rural economy and landscape organization in pre-industrial Flanders

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## Introduction

Today, landscape organization primarily intends to provide people with a pleasant living environment. Until the 19th-20th century, however, this was not the case. In the past most landscapes were primarily intended to secure incomes and survival and were therefore shaped by the rural economy and (as compared to today) the completely differently structured social organization in mind. How did it happen and what were the consequences for our landscapes even until today? This is what this article is about. Geographically it mainly focuses on the rural part of the former county of Flanders, an early well populated area which roughly coincided with the current provinces East and West Flanders but also included parts of northern France and Zealand Flanders.

## 1. What is a landscape and why were landscapes important in past societies?

A landscape is the *visual* part of our environment. It is determined by both natural and human influences.[1] Since the past two millennia, landscapes have in many areas of our planet *mainly* been shaped by *human transformations* such as agricultural cultivation, the boundaries of land plots,

[1] Antrop and Van Eetvelde 2017

building, infrastructural elements (roads, canals) and vegetation. The features of these human transformations are basically influenced by the features of *social* organization. The social organization was shaped by the way survival was organized. The organization of social collaboration and survival was determined by property and power structures (rules) that could be different from one area to another and from one period to another.

It has been shown that in pre-capitalist societies, to a large extent, the social organization was situated at a rather regional level, while other elements of that organization such as religion, parts of infrastructural organization etcetera were influenced by supra-regional features.[2] The importance of regional variation was due to differences in family structures and family survival strategies. It was also supported by religion but was also the consequence of limited transport possibilities while also physical aspects of landscapes as well as regional climate variation required particular (often regional) forms of social organization. It led to a variety of regional formal and informal rules and agreements that one is calling today often 'institutions.

Production systems of an area where people produced according to comparable institutions and in the context of comparable social relations have been called *social agro-systems*. The regional variety of social agro-systems differed from one region to another as well as over time. However, gradually, and in some regions earlier than in others, old régime social relations were evolving towards more capitalist social agro-systems. Almost always, however, features or material results such as elements of landscape organization dating back to the pre-capitalist rural production systems were and still are surviving and are often embedded in the capitalist world economy. Indeed, changes in landscape design by humans was mostly not synonymous with making a *tabula rasa* of former landscapes: even when the societal structures had been changed, one always tried to integrate older elements into the new landscapes even when they had lost their original function; only in very rare situations were landscapes completely swept away. This also creates a number of benefits for historians since landscapes can also be seen as historical and even prehistoric sources in their own right.

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2 Thoen 2004

Of course, besides human elements, natural elements too, such as soil structures, climate and relief (mainly changing due to natural factors although human influence was often present as well), shaped landscapes to a large extent. This variety of natural elements explains why in spite of a rather similar social organization a wide regional variety in landscape features is far from uncommon although it is at the same time possible to see common features as well.

History showed that, in general, past landscape design and evolution was especially shaped for the sake of food production and the survival of the majority of society and to benefit the power and prestige of a small (ruling) minority that determined the production structures, since the possession of land and landscapes was also considered as a way to externalize power and social prestige. Therefore, past landscapes can only be understood if we understand the way past societies organized their survival and power.

Since mankind had adopted a sedentary lifestyle (slowly since about 12,000 years ago), people could not organize income and survival individually. Collaboration between families and social groups delivered the necessary surpluses to organize the survival and to increase labor productivity up to the level that family survival and reproduction was possible. At the same time, as soon as people gave up living only from hunting and gathering, a hierarchical social structure (social organization) emerged in the rural societies that cultivated the land and produced foodstuffs.

As we have mentioned, within Western Europe that social organization was to a large extent organized in a rather regional way and it showed many regional differences as well as differences over time. These differences were also largely determined by the period during which intense land occupation took place but also by economic-geographical elements such as the vicinity of towns and markets, the rigidity of existing social and even political structures and power structures or the rise in investment costs.

## 2. The rural economy and 'social agro-systems'

An area with a particular social organization that organized its rural production and survival during a certain (mostly rather long) period according to the same social relations and in accordance with the environment, has been labeled in previous publications as a 'social agro-

system'.[3] A comparable definition could be to envisage a social agro-system as "a production system of an area where people produced according to comparable institutions and in the context of comparable social relations and power structures". For reasons mentioned above, there was a rather considerable variety of social agro-systems from one region to the next as well as over time. On the other hand, social agro-systems with a lot of similar features may have existed in different areas and during different time periods.

While they often retained their features for centuries, these systems were not stable over time everywhere. While in some areas the social organization was evolving towards more capitalist social agro-systems – i.e. towards systems where (increasing) profit making and enlargement of holdings was the main goal of the majority of the farms – features of a *pre*-capitalist social agro-systems based on the *survival of the family* in many cases remained the main goal, rather than profit making and engrossment of holdings. In some areas, features of an economy based on family survival are even today still surviving and embedded in the capitalist world economy.

These changes in social agro-systems resulted to a certain extent in the adjustment of landscapes in which people lived. However, in general people were looking for the easiest way and a new social agro-system (a new way of collaborating to make money or to survive) did not lead to a completely renewed landscape! Older elements of former landscape organization were either integrated in new landscapes or became landscape elements that lost their original meaning.

In what follows we will focus on the influence of these agro-systems on landscape evolution. Some features are still visible today in the current landscape design.

[3] Thoen 2004

## 3. The social organization in rural inland Flanders from the 12th century until the 19th century: the evolution of the peasant society in the preindustrial period in relation to other social layers

On the eve of the late medieval period (c. 12th-c. 13th century – in some places later, in others earlier), in general the social agro-systemic outlines (or and the social structures) had evolved towards one rather similar system in most areas of the County of Flanders. Slowly from about the 14th century on, only in the (large) 'coastal part' of Flanders did a new and even divergent system develop, as will be discussed further on (paragraph 4). In the core area of Flanders, with its sandy and sandy-loamy upper soils and early intensive colonization, the survival system developed in the classic middle ages lasted until well into the 19th century.

It is important to know that as early as about 1250 most areas of Flanders were already intensively reclaimed, which means that most woods and poorly used areas had disappeared and even that most common fields had been reclaimed, put under the plow or changed into well drained meadow lands and, most importantly, privatized. In a European context, this was rather exceptional. In many neighboring areas situated within the Northern and Southern Netherlands, this was not the case: in the Belgian Campine area (in north-eastern Belgium) for example and in many other sandy areas of other countries such as France, the Netherlands and Germany, large acreages of common, less intensively used and non-privatized fields, survived until the 18-19th centuries and covered in many parishes often more than half the surface. This was in large part due to specific power structures: less lordly power, fewer towns as well.

In the county of Flanders, however, until about 1200-1250, similar large areas of common fields and woods must have been abundant everywhere. Before that time, as was the case in most areas of Western Europe, a seignorial structure had developed: a network of local lords – some probably relatives of old Carolingian nobility, but others in all likelihood mostly richer farmers – could profit from the decline of the central power of the Kings of France and of Germany to usurp parts of the originally royal jurisdiction that generated power and money at the expense of the peasants. However – and this was peculiar to the Flanders area – the power structures

quickly changed in favor of the most powerful of lordly class, the count of Flanders. From the 11th century on, the count managed to counter the local influence and power of the regional and local lords. The origins of the latter have been elaborated in a previous paper[4] However, the role of the count himself but also the role of the towns (being very powerful at least since the 12th century) cannot be underestimated as driving forces in that process. Indeed, from about 1100, a tactful management of the count of Flanders using rivalry and alliances between social noble and non-noble groups and the growing class of the bourgeoisie, as well as his strategy using titles and functions to eventually make the nobility and bourgeoisie dependent on him, simultaneously with the self-destruction of part of the nobility due to its urge for luxury and short-term income in devaluating cash money, eventually led to a rather specific situation in many areas of the Flemish countryside. It was due to the latter evolution and tactical play between all these social groups that the lordly power of the local lords was going down in favor of the power of the Flemish count and partly also of the towns, which had accrued real political power especially between the 13th and 16th centuries.

More importantly, peasants too profited from the described evolution and that influenced landscape evolution. This took place mainly in two ways:

*Firstly* because the previously mentioned rivalry between the social groups made sure that taxes (and other forms of surplus extraction) stayed relatively low until the late 16th century and the incomes of many Flemish peasants stayed stable or increased, which encouraged the holdings to split up; an equal split-up of holdings between family members, both sons and daughters, had become common and moreover formed an extra stimulus for reclamation and intensification of land use.[5]

*Secondly* because the foundations of power by the local lords were undermined due to the above-mentioned power struggle; also the lords themselves mostly had chosen to encourage the increase of the number of inhabitants in their local seigneuries by letting out the seigneurial lands and common fields. More people generated a higher income, while the peasants could profit as long as reclamations were possible, which was until about 1250 only. Moreover, one could ask for the new reclaimed lands rents in

4 Warlop 1975; Thoen 1988.
5 Thoen and Soens 2008.

money instead of rents in kind which was easier to use for their increased needs to buy modern luxury goods brought in or made by the townspeople. In the middle of the 13th century, however, that evolution halted since only marginal, only fewer valuable **lands** were available for reclamation. Many of the traditional sources of income of the lords lost their value. Moreover, from the late 13th century on, these lords were also losing power because they lost their judicial grip on the wealthiest population inside their seigneuries. Indeed, due to the growing power of the cities, it had become common practice for people living in the countryside to also obtain the status of a citizen (a 'burgher'). This practice, supported by the count of Flanders, weakened the power of the local lords since members of the "bourgeoisie foraine" (or "buitenpoorters" in Flemish), as these burghers were called, fell under the jurisdiction of the towns instead of the local lords.[6]

Moreover, most lords had been deprived of the possibility to generate additional new incomes based on the traditional seigneurial power. It is known most of the attempts of a seigneurial reaction failed since the count had deprived them of the legal basis to do so due to the fact that they had lost the higher judicial rights in their own seigneurie in favor of the more powerful central authority. However, some 'old' and many 'new' lords could become active in new activities or generate new income linked to business (toll-income); others obtained an administrative role in governmental administration. These new activities led to a new, more powerful and modern nobility, linked to a more modern state regime, joining or replacing the older noble families, at an accelerated pace from the Burgundian period.[7] However, becoming lord of seigneuries still remained important, not so much anymore for the income or direct power over tenants living in the seigneuries, at least not anymore, but especially for reasons of prestige. Therefore, since the late 13th century, many lords became 'collectors of seigneurial titles', in many cases probably without actually having set foot in the territories of these seigneuries – many seigneuries even did not get a real castle. Many nobles preferred to live in the neighbourhood of the central court or in the towns.

6 Thoen 1988; Thoen and Soens, 2015.
7 Buylaert 2010.

The restriction of the local power of the lordly class certainly lowered the tax burden, which favored the evolution of the incomes and of the legal status of the peasants living in their rural seigneuries.

The town councils and the urban *bourgeoisie* class tried to take over the power over the countryside, but they never really succeeded because the count of Flanders and later the dukes of Burgundy and the Habsburg kings tried to keep the property in and power over the countryside from falling into the hands of the wealthy citizens as much as possible.[8] Nevertheless, the towns partly succeeded in getting a grip on the country via the above-mentioned "*bourgeoisie foraine"*[9], the conquest of seigneurial titles, the purchase of land and the foundation of new farms. However, these towns never obtained full power over their hinterland, and certainly not in the sandy part of inland Flanders.

Finally, the central government ('the count') couldn't get full authority over the countryside either. Indeed, since the late 13th century and more regularly since the late 14th century, the count needed the consent of the estates ("staten") and stations ('*standen')*: the representatives of the large towns (commons), of the clergy and of the lordly class co-decided over the tax burden of the direct taxes.[10] Different from the English system in the Kingdom of France nobility and clergy did not make one estate but each station had its own estate.

Mainly due to this process, tax burden remained relatively low in Flanders until about the second half of the 16th century. This also worked in favour of the development of the countryside and of the peasants who lived in this county: it helped inland Flanders to become a very crowded area of many small poor peasants, who nevertheless managed to secure an income, allowing them to survive and feed relatively large families.[11] In addition, the residents of inland Flanders were given the opportunity to have their sons and daughters (often temporarily) work in the neighbouring agro-system of the coastal area.[12]

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8 Thoen 1988.
9 Thoen 1991.
10 Blockmans 1978, Boone 2005.
11 Thoen and Soens, 2008.
12 Devos et al., 2011. About the social agro-system of the coastal area: see below.

## 3.1. The structure of the peasant society of inland Flanders: features

Mainly due to the described evolution of the power balances, these group of small peasants became the backbone of the rural economy in rural sandy-loamy inland Flanders. During the Old regime, an average of 50 to 70% of the surface of the land remained in the hands of these small peasants.[13] From the 13th century, they had become homesteader-possessor of most of their own lands. Due to long-term inflation, the rents (often going back to the early middle ages) they originally had to pay to the lordly classes gradually became rather unimportant. Moreover, from the late 13th century, they could appeal to quite sophisticated credit systems and developed a rather well-functioning charity system (in some areas up to 10 +% of the regional product[14]) for the poor who temporarily fell out the system, as recent research has shown. The village communities and solidarity systems were relatively strong. The amount of common fields, however, was limited[15].

During the old regime, the majority of Flemish villages were structured as follows. Most of them had only one to a few larger farms per village (with an average size between 20-80 ha), which were cultivated through a leasing system and owned by citizens and nobility. The large majority of the acreage was part of smaller 'family'-holdings owned by the peasants themselves (in exchange for a rather symbolic rent). The peasants also leased land between each other. Some land (gradually a larger part of the total acreage) was bought also by externals but most peasants succeeded in keeping their homesteads in property. That (small) homestead being property of the peasant was and remained the backbone of the survival system until the 19th century. Beside this homestead, land plots were sold and bought a lot and this was mainly attuned to a life cycle system: new families started with a small amount of land, increased their holding with an eye to the enlarged family needs and possibilities and they restrained their holdings again at the end of their active carrier as peasants. The few larger farms – mostly between 1 and 5 per parish – were integrated in the system. They

13 See the many data in the 16th century tax registers called 'penningkohieren' (c. 1570) e.g. Between the many studies of that source the most useful is Abbeele van den,1985.
14 van Bavel et al. 2015.
15 Vanhaute and Lambrecht 2005.

delivered extra labor during the high season. These farms lived in a kind of *symbiosis* with the smaller peasants who worked on the lands of the larger farmers, mostly as part-time servants only.

As early as the Middle Ages, the described family-survival system was also sustained by so-called protoindustrial activities. Indeed, it is a mistake to think that a rural society was mainly involved in agriculture only. In prehistoric times already, peasants tried to gain additional incomes from industrial activities. In inland Flanders, especially flax processing and linen production and in some areas the making of woolen drapery was very well-developed. Despite the very low labor productivity of these activities, they could provide an additional income and were an aid for the survival of the family.[16]

At least from the 17th to early 19th century, in (inland) Flanders, linen, woven on the countryside, was exported in large quantities to the Americas to dress the slaves in that continent, but the activity was well-known from the high middle ages. In this way, peasant societies were gradually integrated into the processes of the growing world economy. Apart from textiles[17], other protoindustrial activities were common in the countryside such as the making of clogs (made in the sandy areas adjacent to the polder areas, but mostly exported to these clay-polder areas, where they were very handy not to get stuck in the boggy soils)! In some areas also barrel making as well as basket making were popular as ancillary activities as well (baskets were made with willow, which was quite abundant in Waasland)[18].

## 3.2. The land and labour productivity in inland Flanders

The intensive use of land by the peasants in inland Flanders is responsible for an exceedingly high *land* productivity in agriculture, probably from the 13th century onwards already.[19] This means that, probably almost nowhere else in the world was the production of land per surface (e. g. per ha) as high as in (the current provinces East and West) Flanders. Therefore, it is not surprising that, especially from the 17th century on, until the mid-19th century, so many foreign visitors and agronomists were full of praise and

16 Thoen and Soens, 2015 a and b.
17 Vandenbroeke 1977, Mendels 1975.
18 Dewulf, 1979
19 Thoen, 1989.

even described and studied the techniques used in order to introduce them in other countries such as in England, France and Italy.

And rightly so, of course: many of the techniques mentioned were not only applied here but also invented and developed in Flanders (see below).

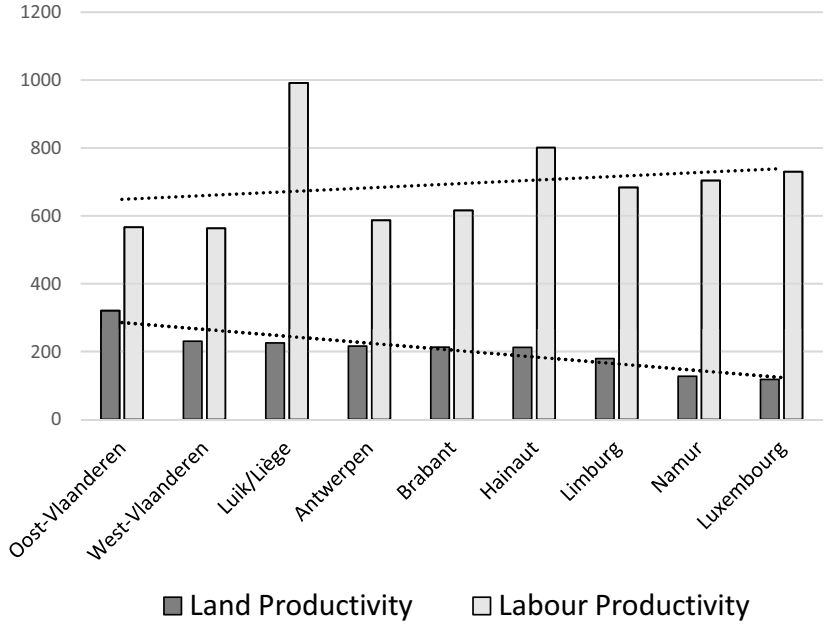


**Figure 1: Land and labour productivity in Belgium compared (a°1812).[a] Note the high land productivity but low labor productivity in the provinces of East and West Flanders being core areas of the former inland part of the County of Flanders. The coastal area of Flanders is today meanly situated in the Netherlands (not on the graph)**

a. Data based on Goossens 1993; see also Dejongh and Thoen 1999.

This is not to say, however, that (inland-) Flemish agriculture boasted a high labour productivity and high welfare. Quite the reverse was true: Flemish peasants had to work very hard for a relatively low income.[20] The majority of holdings were very small. Peasant family incomes were necessarily complemented with child labor. This can explain why population pressure was high until the 19th century, when birth control became general (and the number of family members was going down) and when the peasant

20 Vanhaute, 2001

economy lost its privileged position and was gradually replaced by an economy based on wage earning.[21]

## 3.3. Well-developed rural techniques as a consequence: Flanders was 'the garden of Europe'

Due to the above explained evolution, peasant holdings were small in size. Roughly, one can say that most holdings were between 1 and 2 ha in size only, which is very small. However, this put a pressure on family holdings to use their land as intensively as possible.

Indeed, we have proof that already from the late 13th century onwards, the field systems[22] and crop rotation systems that had become of common use gradually became more free, although regional differences continued to exist. Due to a structural lack of manure – common all over Europe and typical of the old Régime – it was only in the late 18th century that 'long fallow' disappeared completely out of the crop rotations as one of the earliest areas in Europe but in Flanders this evolution started at least in the 13th century and first on the (large majority of) small holdings. From the 17th-19th centuries, many agronomists were admiring the intensive agricultural techniques.

These techniques were mainly based on the application of the following techniques that had an influence on former landscape design:

- A well-developed drainage system of the fields. From the 14th century at least, cultivation was applied on rather narrow high-backed ridges. It was typical for these raised beds (Dutch: '*beddebouw'*) to be eliminated after the season and completely reconstructed during the next season. The system of drainage with underground pipes was only slowly introduced in agriculture from the 18th century on.
- In some areas, cultivation on those kinds of ridges was not applied. Instead, as on the sandy part of the *Waasland* from the (14-?)16th century, lenticular fields were made. In these areas, every field plot was also enclosed with deep fosses and tree rows, often pillows. This system had the same draining function as the high-backed ridges elsewhere in Flanders.

21 Thoen, forthcoming
22 Thoen, 1988, 1990, 1998

- The sorts of crops cultivated led to more bread grains being introduced in the field systems.
- The use of productive tools such as the Flemish hook (pick) with a short but broken arm that allowed a very fast harvesting and cutting the straw rather low close to the surface level. It was also useful for labor division; before, it was mainly women who harvested with the scythe (dating back to the prehistoric period).
- The cultivation of very labor and nutrient demanding plants (hops, flax).
- The use of turnips as green fodder and for tubers (esp. since the late 15th century).
- Intensive plowing (up to 6 times per season) as well as the use of the spade (in some areas, 30% of the acreage was not plowed but dug with the spade by the smaller peasants. Those who had enough money but no horses rented horses to cultivate their land.
- Intensive weeding (by all family members).
- Cultivation of dye plants (madder, woad, weld).
- The use of so called 'up and down husbandry' (13th century) in areas were the fertile layer of the soil was still small.
- The integration of fodder crops in the field systems, giving oxygen to the soils (*leguminosae*: all kinds of beans and peas increasingly cultivated from the 14th century) (on the long fallow and short fallow), also used as green fodder.
- The increasing application of stable feeding and the use of stable manure.
- The use of clover on the fallow (since late 16th century) (clover cultivation improves land fertility).
- The Flemish farmers were he first to use fluid manure (with animal urine) from the 18th century.[23]
- The combination of wood culture with agriculture (with wide living plot boundaries, e.g. in the light, sandy region around Ghent; 17th – 19th century).
- The gradual elimination of long fallow (before sowing winter cereals) and later also the short fallow (turnips/ clover).
- As a consequence, high yields not only of bread grains (rye, wheat) but also of oats (fodder for horses and other animals).

[23] As has been shown recently by De Graef 2018

## 3.4. Other consequences of agriculture for landscapes in inland Flanders

One of the consequences was that the countryside was composed of a large network of very small land plots. Regional differences occurred, however, both in size and in the shape of land plots, often resulting in a kind of 'beehive-structure' with different forms of the cadastral land surveys. Only in the areas where the larger farms were situated did the average size of land plots remain larger.

Another consequence is that in Flanders the large majority of land plots were surrounded by hedges and trees. Indeed, one of the general features of almost all Flemish past regional landscapes is that, despite the absence of larger woods since about 1250,[24] Flanders was *not* a county without trees as sometimes has been mentioned in publications, although most of the former early medieval woodlands have been reclaimed before that date for the reasons summarized above. Being the main building material, wood was particularly valuable before the 19th century! It was also indispensable for cattle breeding to build fences and moreover, it was essential for heating. It was also indispensable for most manufactural activities, especially in an area where the degree of urbanization was very important.

However, especially until the 16th century, the area around the North Sea had the advantage to have access to another combustible, namely peat, which was available in large quantities in the coastal areas. Until the 14th century, it was rather easy to dig it and to ship it towards the inland areas using a network of rivers and canals. After that period, it became scarcer due to a massive amount of late medieval floods and extensive peat digging, which also caused the demand for firewood to rise again.

Coppice wood has always been important for the peasant survival system, but after the shrinking availability of peat in the later middle ages, its value even went up[25] (see figure 2).

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24 Flanders had become an area 'with a lot of threes and a scarce amount of woods' (transl. from Latin) (State Archives Ghent, Sint-Pieters abbey, Liber Inventarius, nr. 125 (a°1281).

25 Dua, 1985 showed the increasing value of coppice wood between the 14th and 16th century.

**Figure 2: Coppice wood and pollard rows in the area around Ghent and in the Waasland (number of mentions in conserved leasing contracts)**

| **Coppice wood in the area near Ghent (Oudburg)** (after Picavet) | | | | | | | |
|---|---|---|---|---|---|---|---|
| century | contracts | willow | | alder | | oak | |
| 14th | 51 | 30 | 59% | 17 | 33% | 4 | 8% |
| 15th | 36 | 17 | 47% | 7 | 19% | 12 | 33% |
| 16th | 89 | 37 | 42% | 1 | 2% | 51 | 47% |
| **Mentions of wood and timber in leasing contracts of Waasland** (sandy area/after Dua 1986) | | | | | | | |
| century | contracts | Hedges with coppice wood | Pollard rows | Timber trees | Tempo-rary fences | | |
| 15th | 17 | 47% | 35% | 18% | 12% | | |
| 16th | 18 | 89% | 31% | 56% | 11% | | |

There were also new woodlands planted in Flanders, especially from the 16th century. But the need for agricultural land did not allow this on a large scale. As a result, the amount of natural fences with hedges, coppice wood and tree lines near the borders of parcels was going up almost everywhere. The same happened with the amount of lower hedges, which were gradually mixed with pollard trees and even hedgerow trees. "Open areas" became scarce in early modern Flanders. The number of parcels fenced with (sometimes very) wide parcel borders planted with shrubs and trees or even fenced with hedges in the form of wide earth banks planted with wood also became popular in certain areas (e.g. the Ghent area). Only when coal as a new combustible was introduced for heating houses and to be used in manufactures in the course of the late 18th century did their importance dwindle. So wood was for a long time an essential element in the peasant survival system!

Village structures too were subject to the survival systems. Indeed, while in the coastal area, from the 14th century onwards, a dispersed settlement with large farms became common practice, in inland Flanders, clustering in hamlets was mostly the rule. This made sense: in a survival economy, there was a strong sense of solidarity between families and a lot of common services were made available in the villages, e.g. for health care or care for elderly people, but also for leisure. In this context, it is striking that archery had become a common leisure practice since the old regime and the Flemish 'café culture' situated in the hamlets and townships was wide-

spread and often the only leisure option. In inland Flanders, even the scarce larger farms were often situated right in the village centers! In coastal Flanders, on the other hand, where, from the 14-15th century on, a different social agro-system had developed, living in hamlets was less common; the (increased number of) large farms that came into existence in that area from the later middle ages on were mainly situated at a distance from the village centers since the farmers preferred to live close to and even in the middle of their fields to lower the labor costs and to distinguish themselves from the small peasants who lived in the village. Moreover, most village centers in that area were shrinking from the late Middle Ages on and some even disappeared and became 'lost villages' (cf. archeology). But as mentioned, the opposite trend can be observed in sandy and sandy-loamy (inland) Flanders.[26]


Figure 3: Hedges and tree-lines north of Ghent c.1770
(source: Ferraris, Carte de Cabinet)

[26] Soens, Tys et al. 2014.

## 3.5. Regional landscapes and rural economy: some examples

However, a rather similar social organization did not necessarily result in identical landscapes. Some landscape features could evolve in an identical way, but some were also influenced by the regional variety of natural soils and environmental characteristics. So, landscape designing shows a large variety. This statement does not, however, prevent the possibility to elaborate a regional typology of landscape organization.

As mentioned above, one and the same social agro-system could result in different landscapes since also the geographical elements such as climate, soils and relief should be considered. Also, the date of reclamation of the area sometimes played an important part in landscape design.

### • In central-sandy Flanders

Central Flanders was mainly characterized by a very light sandy upper layer. Moreover, the largest part of the area north of the river Scheldt was probably never integrated in early medieval large demesne systems.[27]

In the middle ages, this area developed towards a form of *infield-outfield* system.[28] Mainly due to a lack of capital (manure, horses …) the peasant society collaborated to work as intensively as possible only a part of the available land: these intensively cultivated micro-areas were exclusively used for grain cultivation and most of the manure was brought – manure was the gold of the former peasant! – towards these micro-areas, which were called "*kouters"* (a Dutch language term, describing a landscape similar to the open field system divided into selions in England) from the 11th century on. Most villages cultivated only one *kouter* with a size between of about 10 and 80 ha. The fields in these *kouters* were rather small in size. They had an open character, which means that the land plots on the *kouters* were not surrounded by hedges nor by any other permanent fences. This 'open character' is due to the fact that one wanted a maximum output in view of a maximum input. An additional advantage was that the fields on the kouters could be worked in an easy way without any hindering fences or hedges casting shadows. Working the *kouters* was to a certain

27 Verhulst 1995.
28 Thoen 2018.

extend also organized in a collective way (an identical crop rotation was obligatory).

Next to these *village kouters, seigneurial kouters* existed: many of them were probably older (some date back to the 9th century), but the principle was the same: dung was collected and concentrated on these micro-open fields, but in the case of *seigneurial kouters*, it was only the larger farmers who received the yields.

Originally, these kouters were surrounded by a large, more extensively cultivated 'outfield', which was less manured and cultivated in a less intensive as well as in a more individual way and with a larger freedom of cultivation.

Gradually, from the later 13th century on already, the system had lost much of its original meaning. The division between *outfield* and *infield* became more vague and became less meaningful due to more intensive cultivation. Gradually, though (sometimes) quite fast, individually managed fields – mostly surrounded by hedges and permanent enclosures – were subjected to the same intensive cultivation (in Flanders often with the spade …!) and since freedom was more important here, there was more experimentation with new techniques and new crops the result being that the yields on these fields (with completely free crop rotations) in some cases even exceeded those on the 'traditional' *kouters* …

### • In sandy-loamy area in the South of the county

A similar system emerged on the more loamy soils south of Ghent. Here too a similar infield-outfield practice became the rule and originated partly in the early Middle Ages. However, the system lasted longer and the infields became bigger still between the 12-13th centuries (often habitation centers developed a system with *three kouters* for the application of a three-field crop rotation system, see figure XXX). The lands outside the *kouters*, in a similar way reclaimed towards clusters of open fields (and called *velden*), were also gradually more intensively cultivated, but the process was slower than in sandy Flanders due to soil and relief differences. Moreover, an open field system outside these *kouters* was more developed and could hold up longer because these areas were blessed with very large and rich natural meadowlands near the rivers, where cattle breeding (and manure production) could flourish; there were no large areas of woodland

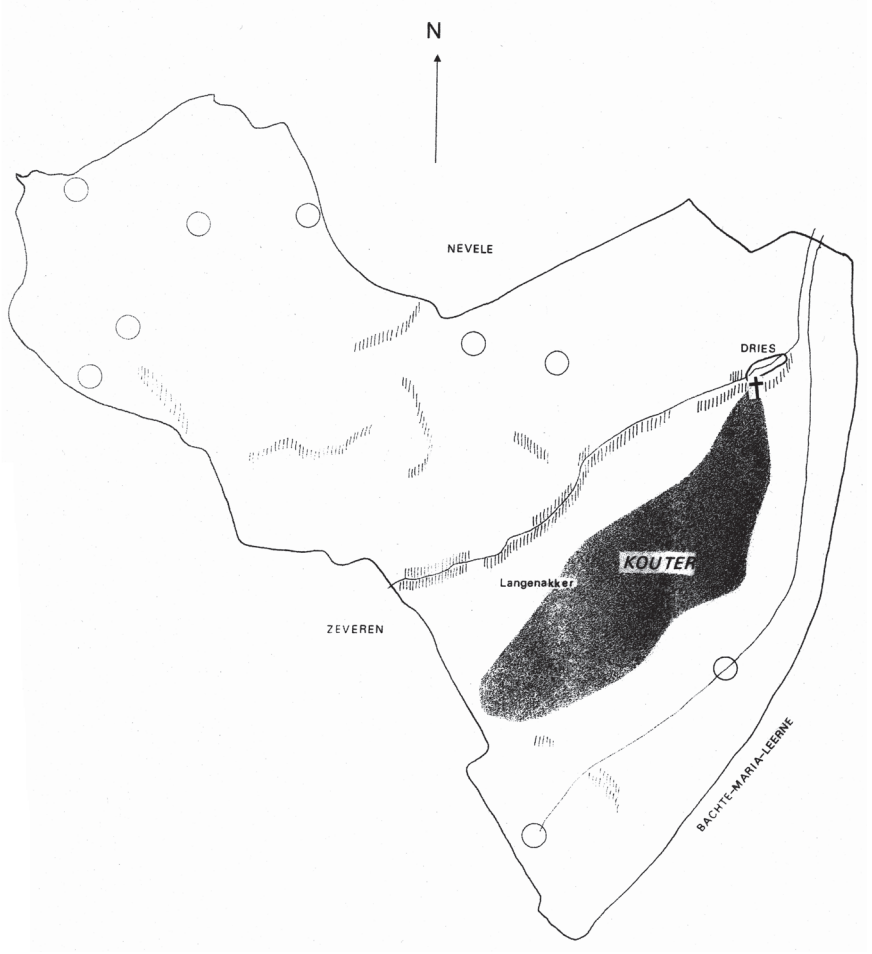


**Figure 4: Reconstruction of the medieval (village-) *kouter* area (in black) in the village Meigem (near Deinze) based on a 17th century land register (figure, Thoen). The village center is situated NW of the *kouter*. It was split up since the medieval period in many smaller plots that were cultivated by the peasants.**

nor (a lot of) enclosures, but instead, a large amount of smaller scattered woodlands supplied many areas with wood. However, here too regional differences were common (e.g. the Courtrai area did evolve towards an area with more enclosed fields).[29]

[29] See also Thoen 2018.

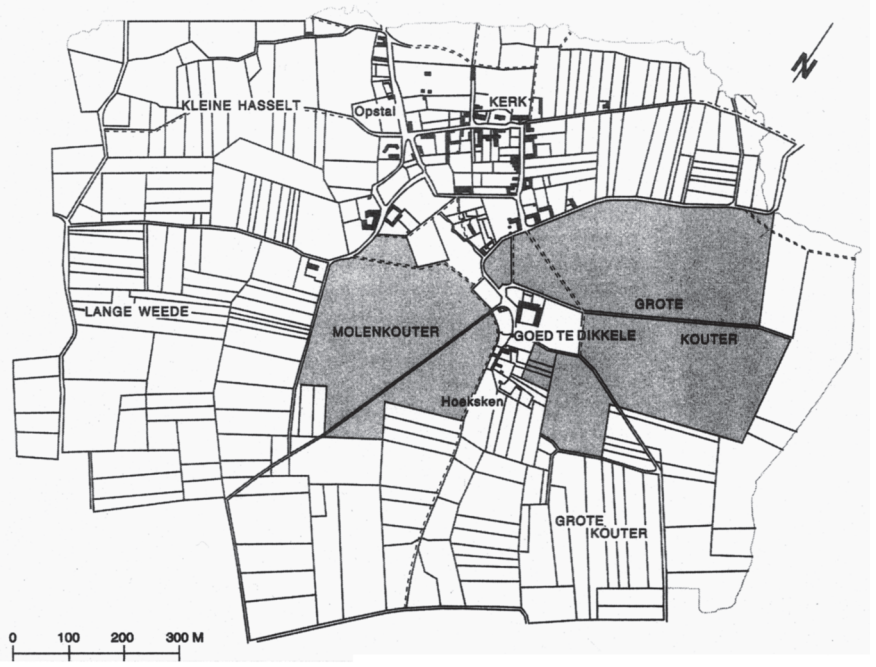


Figure 5: The medieval (hof-) *kouters* ('court'-infields) in the village Dikkele (South of Ghent) reconstructed (Thoen 2011). The largest part of these *kouters* and the farm that cultivated the largest part of them was owned by the Ghent abbey of Sint-Peters since the 10th century. Today the kouter-openfield landscape and its large land plots is still clearly visible in the current landscape.

## • In the sandy part of the Waasland: 'bombed fields' (Dutch: *bolle akkers*)

In the sandy area of the Pays de Waes (Land van Waas), so-called 'bombed fields' became common ('*gebombeerde*', '*bolle akkers*'). They consisted of a network of rather lenticular squared fields and were plowed according to a special technique to keep the typical curving shape of the fields. Contrary to the rest of Flanders, the land was not cultivated according to a raised bed system (for drainage).[30] In these areas, every field plot was also enclosed by deep fosses and tree rows, often pillows. This system had the same draining function as the high-backed ridges elsewhere in Flanders. The shape of the fields was supposed to be sufficient for drainage. Arche-

30 Snacken 1971; Van Aelbroeck 1823.

ologically, some are dated to the 16th century.[31] Probably at least part of these 'bolle akkers' date back to the later middle ages, but that requires further verification.

The rather particular features of the field pattern in the "Land van Waas" has been said to be linked to fact that the area has been reclaimed rather late compared to the rest of Flanders. A large part of the area belonged to the so called "*Koningsforeest*,"[32] a large comital forest dating back to the early Middle Ages and especially used for hunting by the count and his court.

Moreover, the influence of abbeys and citizens was more restricted (see figure X). Indeed, contrary to elsewhere in Flanders, abbeys had erected only a limited number of large demesnes in this area.[33] This was due to the afore-mentioned power of the count of Flanders in the "Land van Waas", where he would levy high rents as a 'local' lord. Therefore, a large number of individuals and free peasants who were gradually allowed to reclaim parts of the forest in the 12-13th centuries could organize their landscape[34] more freely. Apparently, the forest was first divided into rather wide elongated parcels (typical of forest management), which were divided into small square fields in a later stage.

**The village Zaffelare (near Ghent)**

| | |
|---|---|
| Church/ecclesiastical institutions | 34% of the available acreage |
| Nobles and burghers of cities | 30% |
| Rural population | 36% |

**The village Sinaai (Land van Waas)**

| | |
|---|---|
| Church/ecclesiastical institutions | 12% of the total available acreage |
| Nobles and burghers of cities | 11% |
| Rural population | 77% |

**Figure 6: Average property structures in the sandy area near Ghent compared to those in the Land van Waas ca. 1570**

31 Van Hove 1997.
32 Verhulst 1995.
33 Vervaet 2009.
34 Abbeele van den 1985.

# 4. The coastal area: a different social organization emerged in the late Middle Ages

## 4.1. Over-exploitation of the coastal area ruined the original dune and peat landscape[35]

The coastal area was/is a vulnerable environment. Before 1100, only a small part was already diked. A dune barrier was still strong enough to allow only some rivers to enter the hinterland. Behind the dune walls, tidal marshes but especially a thick layer of peat mostly composed of mosses had developed at the surface. Originally mainly used for sheep breeding and wool production and fishing, the environment had gradually turned into an area where small and independent peasants also operated.[36] Agricultural activities on the tidal flats but peat digging too became increasingly popular since there was a growing demand for that product from the growing large towns of Flanders. The fragile environment suffered from over-population and overly intensive activities. Dune barriers were weakened, soils were sinking, peat layers were compressed and as a result huge floods became common: a (to a large extent) human-triggered catastrophe took place. The Belgian and Dutch coastlines were pushed backwards. Investments in protection were too expensive for the original inhabitants, who were small peasants. Due to increased flooding, the land was covered with marine mud instead of peat. This could still be used for sheep breeding (and wool for the peasants' and towns' textile production), but gradually – importing English wool became more profitable – diking of tidal marsh areas was ramped up between the 12 and 14th centuries (although a few dates back to a much earlier period). The peasants could no longer burden the high costs anymore, except with the aid of rich investors such as rich religious institutions and later on also city burghers, who gradually strengthened their grip on the area.

Due to these huge environmental changes in the coastal areas, – contrary to inland Flanders were the same structure survived into the early modern period – an entirely new social structure came into existence. Before the

35 For an overview of the state of the art see Thoen 2013. For more details and literature see: Tys 2013, Soens 2009 and Soens, Tys and Thoen 2014.

36 Tys 2013.

middle of the 13th century, the small peasants in these areas were relatively independent and the area seemed to be well populated. They were also rather numerous – at least much more numerous compared to later periods – as one can see in the sources. Religious institutions gradually gained influence, but in general, most peasants managed to keep their independence. Only when the above-mentioned environmental problems and changes occurred and increased (the sinking surface, the problems due to peat digging, the inundations as a consequence etc.), most peasants lost their property rights due to financial problems and expropriation (supported by the count). This was due to the fact that the environment needed huge investments: the mud flats needed to be diked and an expensive network of canals and locks was now necessary to protect the area against the sea. This could only be financed by external rich burghers and abbeys. The new heavy soils could only be cultivated by larger farmers since the area had become only livable for much larger holdings. Probably many of the former's peasant-owners of smaller holdings became wage earners on these new, larger demesnes. But wage earning in agriculture is for the most part a temporary job and linked to the seasons. Therefore and because labor had become scarce in the coastal area, labor was now to a large extent *imported* from other areas, viz. from the sandy part of Flanders, where another social structure based on small survival farming had survived and even had further developed (see above). Part-time work, especially done by younger temporarily coastward migrating male and female unmarried workers who were saving money to later take over (part of?) the parental holdings in inland Flanders, was very welcome to overcome that stage in their life cycle. This is how the two 'social agro-systems' (the one from inland Flanders and that in coastal Flanders) became 'linked' to each other to a certain extent.

## 4.2. The development of landscapes as a consequence of social change in coastal Flanders

The coastal area can be considered as a combination of both a 'ruined landscape' (due to overexploitation and the loss of many lands swallowed by the sea) as well as in a later stage an 'enriched landscape' (due to the new rich soil formation with clay) but always remained a very 'vulnerable landscape'.

Due to the evolution of geographical and soil changes in the area, the landscape in the coastal area had been changed completely. The original small peasants were driven out of the areas and had lost their land. Many new but (often very) large farms popped up, mostly settled far away from the village centers – in some villages more than 20 – and were founded by bourgeois families, religious institutions and noble men who had bought land and had invested in the (re-) reclamation and drainage of the area in the hope of making a lot of money in the short term with this early form of ground speculation. As mentioned, only these richer classes had enough money to invest in the expensive infrastructure works (dikes, canals locks …). Only larger horse spans (only affordable by these lager farmers) were able to cultivate the land. Moreover, larger farms were easier to lease out and to administrate and in addition gave more prestige as well for the owner as for the farmer. The owners also expected these farmers to eventually earn enough money to invest in infrastructure themselves. At first, this was not the case: due to underinvestment new inundations took place in the 14$^{th}$ to 16$^{th}$ century: since then, a large part of the Belgian coast was covered by the sea and the Western Scheldt river emerged as a 'new' river but swallowed a huge number of former villages … However, from the 15-16$^{th}$ centuries on, partly with the aid of the central government, what was left from the coastal became a bit safer and a new elite of rural dwellers, the large farmers, elites developed.

These new farms were partly operated on the basis of more modern capitalist principles. Many specialized, although not completely. In the Southern part of the coastal area, farms mainly specialized in dairy products (butter, cheese) and bovine meat, in the northern part (near the Scheldt river) more in cereals (wheat, barley). A partly new canal system opened these areas to the markets in the rich cities (Ghent, Bruges, Ypres and many others).

The elites (farmers) of the described (new) *agro-system* had the advantage of the coastal area being situated next to an agro-system where many poorer people were clustered in inland Flanders (as we described). As mentioned, here a stock of people was available that could work as temporary wage earners on these larger farms. This is exactly what happened and allowed these large farms to survive with relatively low labor costs. It has been shown that during the early modern period, the elites of these villages

have tried to prevent wage workers from gaining a permanent home in the coastal polders to prevent the plebs from mixing with the new elite farmers.[37]

However, and despite the (voluntary) regional segregation, economically a kind of symbiosis emerged between the two main groups of Flemish social agro-systems which lasted until the 19th century, when mechanization in agriculture made extra labor on the larger farms much less pressing. A social labor crisis was imminent. The Flemish peasants had to turn to other extra labor possibilities. However, many of them had to wait until the later 19th century before that was available in the towns and especially in the mines as well as the heavy industry in Wallonia and in Northern France.

In summary: the more capitalist social structures had the following consequences for the landscapes in coastal Flanders.

- Shrinking villages between the 13-17th centuries
- A spread of large farms in the same period
- The increase of grasslands (and cattle breeding) in the South, of cereal fields in the North of the coastal area (where the subsoils were too salty for cattle, but where the soils gave high cereal yields)
- A well-developed drainage and canal infrastructure
- Larger and reshaped land plots
- 'Open' fields without hedges
- Large woodlands in between the areas of inland Flanders and coastal Flanders (especially for construction-wood, which was necessary to build the large farms in the coastal area). Some of them were only intensively reclaimed from the 18th century on.

## 5. Non-material elements shaping landscapes as well

The main concern of this article has been to look at our former landscapes from a rather 'materialistic' angle. This is not to say, however, that one should not pay attention to non-material elements of landscape formation such as the role of mentality, religion and customs.

Of course, these elements were important as well. The role of the catholic church and of superstition, for example, was without ~~a~~ doubt very impor-

37 Thijs Lambrecht et al. 2018

tant for landscape structures. However, as economic historians have proven, the catholic church, to a large extent delivered the theoretical and theological support for social and economic inequality in society as we have described.[38]

Yet, the church definitely also played a part in village formation. Indeed, there was, the since the 12-13th century, increased belief in the positive effect of clustering habitation around churches to live near the house of God and to live near the graves of the deceased family members who were believed to rise from dead at God's final judgement. To a certain extent this had an impact on village formation.

Since the peasant mentality of collaboration on the open fields was also partly encouraged by the mentality of solidarity this too can partly be considered as a non-material aspect in landscape formation.[39]

The same holds for the attraction and concentration of habitation towards wealth centers. This was probably the case in the 11$^{th}$-13$^{th}$ century, when power centers such as 'seigniorial moats' contributed to village formation in inland Flanders (seigneurial moats='castrale mottes' (Fl.) = towers on an artificial hill and surrounded by a moat, mostly used as symbols of power for the local lords; some of these castral moats in a later stage developed to larger castles). These symbols of power – typical of the western part of our continent – were centers of consumption and luxury and contributed to the development of a lot of village structures in inland Flanders.

## 6. A concluding remark

In this paper, it is demonstrated that studying historical landscapes is complex. Indeed, landscapes cannot be understood without insight into the functioning of the economy and mentality of the people who lived in these landscapes, nor without the study of the relations between the different social groups in a given society, even not without taking into account the political balance as well as the technical abilities of that society and also not without understanding the role of mentality and religion … In addition, one also needs to have an insight into the evolution of soils and nature …

38 J. Sánchez-Pardo et al., 2015
39 Dyer et al. 2018.

Understanding former landscapes and their evolution therefore is not an easy task. This is why understanding rural and landscape history requires a highly interdisciplinary approach, which still is, unfortunately, currently only rarely the case. This is a pity since the landscapes we are living in are the material witnesses of our past and our identity.

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